

Attorney Docket No.: J6834(C)
Serial No.: 10/667,922
Filed: September 22, 2003
Confirmation No.: 9900

BRIEF FOR APPELLANT

Sir:

This is a Brief on appellant's Appeal from the Examiner's Final Rejection concerning the above-identified application.

The Commissioner is hereby authorized to charge any additional fees, which may be required to our deposit account No. 12-1155, including all required fees under: 37 C.F.R. §1.16; 37 C.F.R. §1.17; 37 C.F.R. §1.18.; 37 C.F.R. §1.136.

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I. REAL PARTY IN INTEREST

Unilever Home & Personal Care USA, Division of Conopco, Inc. is the real party in interest.

II. RELATED APPEALS AND INTERFERENCES

There are no other prior or pending appeals or interferences or judicial proceedings known to appellant, the appellant's legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

III. STATUS OF CLAIMS

Claims 1-6 and 8-21 are rejected and subject to the present Appeal. Claim 7 has been canceled.

IV. STATUS OF AMENDMENTS

No amendments were submitted after the Final Rejection. Thus, claims 1-6 and 8-21 are appropriate for appellate review.

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V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 concerns a solid cosmetic composition having the features of (i) a water dissolvable solid carrier comprising a destructured starch; (ii) a fragrance deposited onto the solid carrier; and (iii) at least one cosmetic agent incorporated into the solid carrier. See page 3 of the specification at paragraph [0008]. The at least one cosmetic agent is present in an amount from about 0.001 to about 50% by weight. See original claim 7 and page 17 at paragraph [00032].

Claim 2 identifies the structured starch as a zeamays starch. See original claim 2 and the reference to corn starch at page 5, paragraph [00014].

Claim 3 identifies the composition as being in a form selected from tablets, pellets, beads or sheets. See the Abstract of the Disclosure and original claim 3.

Claim 4 identifies the cosmetic agent as a surfactant, emollient, humectant, conditioner, sunscreen, anti-aging active or mixtures thereof. See the specification at page 18, paragraph [00033].

Claim 5 details the composition as being in a honeycomb shape. See the specification at page 6, paragraph [00017].

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Claim 6 further identifies the honeycomb as being formed from a plurality of sections, each of the sections defined by a fracturable perimeter allowing separation of the section from the honeycomb. Note page 6 at paragraph [00017] and original claim 6.

Claim 8 identifies the fragrance as present in an amount from about 0.001 to about 10% by weight of the composition. See the specification at page 17 under paragraph [00030].

Claim 9 identifies the destructurized starch as being present in an amount from about 10 to about 100% by weight of the solid carrier. See the specification at page 7 under paragraph [00019].

Claim 10 is an independent claim reciting a foamed solid cosmetic composition. This composition includes (i) a water dissolvable foamed solid carrier comprising a destructurized starch; (ii) a fragrance deposited onto the foamed solid carrier; and (iii) at least one cosmetic agent incorporated into the foamed solid carrier. See page 3 at paragraph [0008] noting the preference for the foamed variant of a solid cosmetic composition. The at least one cosmetic agent is present in an amount from about 0.001 to about 50% by weight. See page 17 at paragraph [00032].

Claim 11 is the third of the independent claims. Therein is recited a solid cosmetic composition that includes: (i) a water dissolvable foamed solid carrier comprising a destructurized starch; (ii) a fragrance deposited onto the foamed solid carrier; and (iii) at least one cosmetic agent incorporated into the foamed solid carrier.

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See the specification at page 3 under paragraph [0008]. The at least one cosmetic agent is present in an amount from about 0.001 to about 50% by weight. See the specification at page 17 under paragraph [00032].

Claim 12 is dependent through claim 1 and identifies the destructureized starch as a molecularly homogeneous material with both amylase and amylopectin dispersed uniformly throughout the material and is amorphous having no ordered molecular structure. See the specification at page 4 under paragraph [00011].

Claim 13 is dependent through claim 12 and recites an amylase content of at least 45% by weight of the material. See the specification at page 5 under paragraph [00013].

Claim 14 recites a foamed solid cosmetic dependent through claim 10 wherein the destructureized starch is a molecularly homogeneous material with both amylase and amylopectin dispersed uniformly throughout the material and is amorphous having no ordered molecular structure. See the specification at page 4 under paragraph [00011].

Claim 15 recites a foamed solid cosmetic composition dependent through claim 14 wherein amylase content is at least 45% by weight of the material. See the specification at page 5 under paragraph [00013].

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Claim 16 recites a solid cosmetic composition dependent through claim 11 wherein the destructureized starch is a molecularly homogeneous material with both amylase and amylopectin dispersed uniformly throughout the material and is amorphous having nor ordered molecular structure. See the specification at page 4 under paragraph [00011].

Claim 17 recites a solid cosmetic composition dependent through claim 16 wherein amylase content is at least 45% by weight of the material. See the specification at page 5 under paragraph [00013].

Claim 18 recites a foamed solid cosmetic composition dependent through claim 10 wherein the destructureized starch is a *zea mays* starch. See reference to corn starch at page 5, paragraph [00014] and original claim 2.

Claim 19 recites a solid cosmetic composition dependent through claim 11 wherein the destructureized starch is a *zea mays* starch. See reference to corn starch at page 5, paragraph [00014] and original claim 2.

Claim 20 is dependent through claim 1 specifying that the destructureized starch is present in an amount from 50 to 100% by weight of the solid carrier.

Claim 21 dependent through claim 1 focuses even more specifically to identify the destructureized starch as present in an amount of about 100% per weight of the solid carrier. See the specification at page 7, paragraph [00019], first sentence.

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VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Are claims 1-6 and 8-21 obvious under 35 U.S.C. § 103(a) over U.S. Patent 5,925,380 (Roullier et al.), in view of U.S. Patent 6,248,338 (Muller et al.), and as further evidenced by U.S. Patent 5,382,611 (Steptoe et al. I), and its equivalent EP 0 282 451 A2 (Steptoe et al. II).

VII. APPELLANT'S ARGUMENTS

Appellant for many years worked on ways to remove water from commercial cosmetic products. Other than its carrier function, water delivers but little cosmetic benefit. Removal of water results in a concentrated product requiring less packaging, occupying less shelf space and incurring lower transportation costs. Any water necessary for the formulation may later be added by the eventual consumer during application of the product. Essentially waterless systems are therefore ecologically more friendly.

Appellant envisioned delivering cosmetic concentrates in solid form, especially as foamed solid objects. These might be tablets, pellets, beads or sheets. A significant problem encountered with the solids was how to incorporate fragrances that could readily be re-constituted upon hydration. Work with many different types of solid materials did not easily achieve an answer.

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Success was finally achieved by utilizing a special form of starch. The starch was required to be a destructureized material. Moreover, appellant found that the fragrance must be deposited onto the surface of the destructureized starch rather than incorporated with other cosmetic agents within the solid carrier. These findings allowed the fragrance to be expressed with greater intensity than heretofore achievable.

Appellant's invention is distinguished from the references by the feature of fragrance being deposited onto the solid carrier that comprises destructureized starch. Neither Rouiller et al., Muller et al. nor Steptoe et al. (I or II) disclose this feature. A *prima facie* case of obviousness has not been established.

Rouiller et al. discloses an expanded solid composition having a matrix formed from a starch-rich component and containing at least some expanded thermoplastic hollow particles. These compositions were said to be useful for cosmetic or dermatological purposes. Specific products include powdered color cosmetics and dry shampoos.

Nowhere in this reference is any mention of destructureized starch components. Although Rouiller et al. utilizes an extruder in the process, the reference emphasizes that extrusion be limited to temperatures below 100°C. See column 1 (lines 24-26); column 5 (lines 38-41); and Examples 1 and 2 at column 6 (lines 37 and 67).

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Temperatures at which Rouiller et al. extrude are insufficient to destructure starch. Appellant directs attention to the disclosure of Steptoe et al. I which requires elevated temperatures to achieve destructure. The temperatures are stated to be in the range of 100° to 200°C, and most preferably between 160°C to 185°C. See column 3 (lines 32-38); column 6 (lines 52-53); column 7 (line 6); Table 1 (fifth column) and column 9 (lines 22-24). Operation at temperatures below 100°C as in Rouiller et al. would not achieve the desired destructure of starch. Accordingly, Rouiller et al. neither expressly nor inherently discloses the presently claimed destructure starch element.

Another deficiency is the absence of any fragrance mentioned by Rouiller et al. Yet if the skilled chemist were to add fragrance, the reference suggests that the extruded compositions because of the lower processing temperatures “can thus contain cosmetic or dermatological substances which are heat-sensitive or unstable at temperatures above 100°C”. See column 1, lines 24-29. The term “contain” means incorporated within rather than deposited externally.

Muller et al. is a reference that unabashedly focuses on pre-gelatinized starch. See the Abstract and column (line 43). This contrasts with the destructure starches necessary for the present invention. Indeed, Muller et al. specify that a decisive feature of the invention is that the starch derivative to be used according to the invention is “pre-gelatinized”. See column 3, lines 35-37.

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Perfumes are formulated into the Muller et al. compositions. Most of the Examples have formulas with perfume as a component. The perfume is mixed with the pre-gelatinized starch in an aqueous system. An intimate mixture of perfume dispersed with starch throughout the composition is thereby achieved. The Examiner has directed attention to the following statement by Muller et al.: "The composition according to the invention can be provided in any form, for example, as solution, emulsion, suspension, gel or foam. It can also be provided as a dry powdery composition which is reconstituted in an aqueous medium upon use" (col. 5, lines 11-15). Yet even in a dry powdery form, perfume will be distributed internally along with starch and other ingredients of the disclosed composition. Not taught is that the perfume must separately be applied as a deposit onto the overall solid carrier.

In the Final Office Action at page 4 (first full paragraph), the Examiner considered that in Muller et al. "fragrance would be interspersed with the starch and therefore, found on the starch."

Appellant amended the independent claims to address this issue. Thus, claim 1 (ii) recites a fragrance deposited onto the solid carrier comprising the destructureized starch. Parallel amendments have been made to independent claims 10 and 11. Neither Rouiller et al. nor Muller et al. teach or suggest depositing fragrance onto any of their compositions that might be in solid form. Appellant further notes that claim 1 (iii) requires that the solid carrier besides starch have at least one cosmetic agent. Any fragrance deposited must be deposited onto the combination of starch/cosmetic agent. This is not the same as merely mixing the perfume with starch in a solid formula.

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Step toe I and II (which are essentially identical texts) teach the existence of deconstructurized starch. No mention is made regarding use of this type of starch in cosmetic compositions. Neither is there mention of any fragrance or perfume.

A combination of Rouiller et al. in view of Muller and Steptoe et al. (I and II) would not render the instant invention obvious. Neither directly nor inherently does Rouiller et al. teach a deconstructurized starch. Secondly, fragrance is not disclosed. If the skilled chemist were to learn anything from Muller et al., it would be to avoid all but pre-gelatinized types of starch. Consequently, the chemist is still left without direction on the proper starch or on how a fragrance is to be incorporated into the starch.

Step toe I and II reveal the deconstructurized form of starch. Yet the skilled chemist is taught by Rouiller that an essential feature must be to process at temperatures below 100°C. This is not how to achieve deconstructurization. There would be no motivation to incorporate deconstructurized starch into Rouiller et al. Neither would the skilled chemist incorporate deconstructurized starch into Muller et al. The latter specifically teaches a need for pre-gelatinization which is a different starch transformation. And none of the references provide any disclosure to deposit fragrance onto the solid carrier that comprises the deconstructurized starch. *A prima facie* case of obviousness has not been presented.

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Destructurized type starch is not an arbitrary selection. Appellant has demonstrated in the specification under Example 21 certain surprising results. Therein is shown that destructurized starch in comparison to an unmodified (native) starch was much superior in expressing fragrance over a prolonged period of time. Thus, there is an experimental basis for the selection of a destructurized starch as an advantageous carrier for a surface deposited fragrance.

In the Final Office Action at page 5 (second full paragraph), the Examiner has a discussion apparently relevant to U.S. Patent 5,736,209 (Andersen et al.). Appellant is uncertain as to whether the Examiner intends the document to be an applied reference (i.e. in combination with Rouiller et al., Muller et al. and Steptoe et al. I and II). Nonetheless, appellant does have some comment with respect to the paragraph at page 5.

Andersen et al. was presented as support that starch binders are sticky once dissolved or gelatinized in water. Stickiness complicates manufacturing since sheets are articles with high starch loading tend to stick to their molds. Further, the Examiner explains that unmodified starch granules also have drawbacks. A stated problem of unmodified starch granules is that they are generally insoluble in water and thereby act as merely passive fillers in wet systems. The theory is then presented that one needs to avoid the gelatinized and also the unmodified (native) starches. Ergo, destructurized starches would have neither of these deficiencies.

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There are many problems with this reasoning. Most problematical is that the references (Rouiller et al. and Muller et al.) themselves find benefit in starches other than destructured ones. Muller et al. is very clear to use a pre-gelatinized variety. Rouiller et al. does not characterize the state of starch after processing. But the conditions of less than 100°C are not likely to produce destructured. Consequently, there is no motivation to substitute the preferred starches of the references with some theoretical advantage culled from Andersen et al.

Further the claimed compositions of the present invention are solids. Little if any water is normally present. Absent water, a non-modified starch granule even though insoluble, would not be a detriment. Neither would a pre-gelatinized starch. Any process to manufacture a solid composition must by definition eliminate to a large extent liquid matter. Removal of water would remove stickiness. In some instances a sticky component would even be a preferred one. Solids can be aggregates and these may indeed require a binder much like brick and mortar. In summary, there are as many reasons to utilize pre-gelatinized and/or non-modified starches as there are motivations against their use.

In the Final Office Action, the Examiner viewed appellant's earlier responses as merely piecemeal argument. These views are mistaken. Motivation has been shown not to exist in combining primary with secondary references. Incompatibility of these references has also been highlighted.

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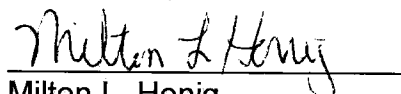
None of the references reveal the claimed aspect of a fragrance being deposited onto a solid carrier. Attention was drawn by the Examiner to Muller et al. at column 24 (lines 58-67), bridging to column 25 (lines 1-4). This section encompasses a series of dependent claims. Dependent reference claim 4 identifies a starch that is a spray-dried starch. Claim 1 through which claim 4 eventually depends, recites a composition that comprises a continuous aqueous phase comprising (i.e. containing) a pregelatinized crosslinked starch. It is evident that the spray-dried starch of claim 4 is placed in the context of a component within an aqueous phase. Clearly the composition that contains the spray-dried starch is an aqueous liquid (or at the very least not a solid carrier as required by appellant's claims).

Note that Muller has a claim 27 that eventually depends from claim 1. Claim 27 recites the further presence within the composition (i.e. the aqueous phase) of a perfume. Thus, it is revealed that Muller et al. does not teach a fragrance deposited onto a solid carrier. Fragrance is placed within the aqueous phase. None of the other references come any closer. The Examiner has failed to set forth a *prima facie* case of obviousness.

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In view of the foregoing comments, appellant requests the Board of Appeals and Interferences to reverse the rejection and instruct the Examiner to allow the claims.

Respectfully submitted,

A handwritten signature in cursive script, reading "Milton L. Honig", is written over a horizontal line.

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VIII. CLAIMS APPENDIX

Claim 1: A solid cosmetic composition comprising:

- (i) a water dissolvable solid carrier comprising a destructureized starch;
- (ii) a fragrance deposited onto the solid carrier; and
- (iii) at least one cosmetic agent incorporated into the solid carrier in an amount from about 0.001 to about 50% by weight and wherein the composition is a solid cosmetic.

Claim 2: The composition according to claim 1 wherein the destructureized starch is a zea mays starch.

Claim 3: The composition according to claim 1 wherein the composition is in a form selected from the group consisting of tablets, pellets, beads and sheets.

Claim 4: The composition according to claim 1 wherein the cosmetic agent is selected from the group consisting of surfactants, emollients, humectants, conditioners, sunscreens, anti-aging actives and mixtures thereof.

Claim 5: The composition according to claim 1 which is in a honeycomb shape.

Claim 6: The composition according to claim 5 wherein the honeycomb is formed from a plurality of sections, each of the sections defined by a fracturable perimeter allowing separation of the section from the honeycomb.

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Claim 7 (canceled)

Claim 8: The composition according to claim 1 wherein the fragrance is present in an amount from about 0.001 to about 10% by weight of the composition.

Claim 9: The composition according to claim 1 wherein the destructurized starch is present in an amount from about 10 to about 100% by weight of the solid carrier.

Claim 10: A foamed solid cosmetic composition comprising:

- (i) a water dissolvable foamed solid carrier comprising a destructurized starch;
- (ii) a fragrance deposited onto the foamed solid carrier; and
- (iii) at least one cosmetic agent incorporated into the foamed solid carrier in an amount from about 0.001 to about 50% by weight and wherein the composition is a foamed solid cosmetic.

Claim 11: A solid cosmetic composition comprising:

- (i) a water dissolvable foamed solid carrier comprising a destructurized starch;
- (ii) a fragrance deposited onto the foamed solid carrier; and
- (iii) at least one cosmetic agent incorporated into the foamed solid carrier in an amount from about 0.001 to about 50% by weight and wherein the composition is a solid cosmetic.

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Claim 12: The composition according to claim 1 wherein the destructure starch is a molecularly homogeneous material with both amylase and amylopectin dispersed uniformly throughout the material and is amorphous having no ordered molecular structure.

Claim 13: The composition according to claim 12 wherein amylase content is at least 45% by weight of the material.

Claim 14: The foamed solid cosmetic composition of claim 10 wherein the destructure starch is a molecularly homogeneous material with both amylase and amylopectin dispersed uniformly throughout the material and is amorphous having no ordered molecular structure.

Claim 15: The foamed solid cosmetic composition of claim 14 wherein amylase content is at least 45% by weight of the material.

Claim 16: The solid cosmetic composition according to claim 11 wherein the destructure starch is a molecularly homogeneous material with both amylase and amylopectin dispersed uniformly throughout the material and is amorphous having no ordered molecular structure.

Claim 17: The solid cosmetic composition according to claim 16 wherein amylase content is at least 45% by weight of the material.

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Claim 18: The foamed solid cosmetic composition of claim 10 wherein the deconstructurized starch is a *zea mays* starch.

Claim 19: The solid cosmetic composition according to claim 11 wherein the deconstructurized starch is a *zea mays* starch.

Claim 20: The solid cosmetic composition according to claim 1 wherein the deconstructurized starch is present in an amount from 50 to 100% by weight of the solid carrier.

Claim 21: The solid cosmetic composition according to claim 1 wherein the deconstructurized starch is present in an amount of about 100% by weight of the solid carrier.

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IX. EVIDENCE APPENDIX

None.

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X. RELATED PROCEEDINGS APPENDIX

None.